

GP-303814**METHOD AND APPARATUS FOR CONTROLLING A STAND-
ALONE 4-LEG VOLTAGE SOURCE INVERTER****ABSTRACT**

Methods and apparatus are provided for controlling a stand-alone four-leg three-phase inverter. The inverter three-phase output is converted from AC domain elements to corresponding DC domain elements. The DC domain elements are processed into combined regulating and imbalance compensating signals, including over-current limiting. The compensating signals are restored to corresponding AC domain signals, and are processed into control inputs for the inverter, in order to stabilize the inverter output when connected to an unbalanced load. The inverter controller can be implemented entirely in software as a control algorithm.